

# PREPARING STUDENTS FOR SUCCESS IN

## GRADE 9

### Your Child's Progress

*A parent resource for understanding what your child should learn and be able to do this year, and helpful suggestions for supporting your child's learning at home.*



CONNECTICUT STATE  
DEPARTMENT OF EDUCATION



**W**e owe it to our kids to make sure that they receive an education that prepares them to thrive in a global economy and civic life. That is why Connecticut raised the bar and issued an instructional roadmap that will prepare our kids for college and careers.

Our roadmap, the Connecticut Core Standards, sets learning expectations for what students should learn and be able to do at each grade level so that by the time they graduate from high school, they are ready to succeed in college and the workplace. These standards help set clear and consistent expectations for everyone involved in your child's learning.

### **A ruler for measuring student success**

The Smarter Balanced assessments measure student progress based on the standards, or learning expectations, for Grades 3-8 in English language arts and mathematics. The scores can be used as a ruler to measure the skills your child acquired throughout the school year. The tests provide information about achievement in the current grade and growth from one grade to the next.

### **Building a bridge between school and home**

At home, you can play an important role in setting high expectations and supporting your child in meeting them. If your child needs a little extra help or wants to learn more about a subject, work with his or her teacher to identify opportunities for tutoring, to get involved in clubs after school, or to find other resources. Talk to your child's teacher regularly about how your child is doing – beyond the parent-teacher conferences. By building a connection between home and school, you can greatly improve the impact of your child's learning.



# What Your Child Learned in **Grade 8**

## Mathematics

- Developing the understanding that every rational number (such as  $1/2$ ,  $0.3$ ,  $2$ , or  $-2$ ) can be written as a decimal, but that the decimal form of an irrational number (such as  $\sqrt{2}$  or  $\pi$ ) is both non-repeating and infinite (goes on forever).
- Using linear equations ( $y = mx + b$ ), systems of linear equations (two or more equations), and their understanding of slope (rate of change) to model situations and solve problems.
- Comparing the properties of two functions (a special rule) represented in different ways (table, graph, equation, or description).
- Using transformations translations (slides), rotations (turns), reflections (mirror image), and dilations (enlarging or shrinking) to understand congruence (the exact same) and similarity (proportional size).
- Using the Pythagorean Theorem (an equation relating the lengths of the sides of a right triangle:  $a^2 + b^2 = c^2$ ) to solve problems.
- Solving problems involving the volume (amount that can be held) of cylinders, cones, and spheres.
- Constructing scatterplots (many points on a graph) to examine the relationship between two quantities, for example, arm span and height.

## English Language Arts

- Citing evidence that most strongly supports an analysis of a book, article, poem, or play.
- Analyzing where texts on the same topic disagree on matters of fact or interpretation.
- Writing and developing a topic with well-chosen facts, definitions, details, quotations, or other information.
- Writing arguments that state a claim, identifying the claim from opposing views, and supporting the claim with reasons and evidence from accurate and credible sources.
- Conducting research projects that use many credible print and digital sources.
- Using technology to produce and publish writing and to work with others on writing.
- Participating in class discussions on various topics, texts, and issues by expressing ideas and building on others' ideas.
- Listening to another speaker's argument and evaluating whether the claims are based on sound reasoning and evidence, and identifying evidence that is irrelevant.

*Please note: Text is printed materials (books, newspapers, magazines) as well as graphics, drawings, and multimedia such as audio or visual recordings.*

## What Your Child Will Learn in **Grade 9**

### Mathematics

- Deepening and applying their understanding of previous mathematical concepts from K–8.
- Creating and solving mathematical expressions (relationships using numbers and letters with no equal sign) and equations (relationships using numbers and letters with an equal sign) that describe real-world situations.
- Creating and interpreting graphs and their applications.
- Using algebraic and geometric reasoning to model real-life situations.
- Understanding the rules of probability and using them to interpret data and evaluate the outcomes of decisions.
- Distinguishing between correlation (relationship) and causation (having an effect on something).
- Interpreting graphs as the relationship between, or statistical significance relating, two variables.

### English Language Arts

- Reading closely and critically complex works of literature and informational texts.
- Interpreting what they read and presenting an analysis based on examples and evidence from the text.
- Analyzing how an author's choices create effects such as mystery, tension, or surprise.
- Reading texts representative of various times, cultures, and worldviews.
- Analyzing the impact of word choices on meaning and tone.
- Identifying whether the argument in a text has valid reasoning and sufficient evidence.
- Writing literary analyses, reports, and summaries with logical ideas that are well-supported with relevant facts, examples, and details.
- Evaluating the credibility and accuracy of sources.
- Conducting short- and long-term research projects to answer a question or solve a problem.
- Using technology in presentations to enhance understanding of findings, evidence, and to add interest.

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# How You Can Help Your Child

## Mathematics

- Encourage your child to be persistent by reminding them that mathematics requires patience, practice, and time to think and reflect.
- Show enthusiasm for your child's study of mathematics.
- Urge your child to ask the teacher questions either during or after class.
- Encourage your child to review class notes every night and look at the answers to difficult problems to work backwards and determine how the solution was found.
- Notice ways that people in the real world use and apply mathematics every day and point those examples out to your child.

## English Language Arts

- Read and discuss informational texts with your child such as newspapers, magazines, technical manuals, or health, science and social studies articles.
- Compare and contrast movies and videos with previously read books. Discuss with your child which version is better. Your child should use evidence to support his or her claims.
- Watch the news with your child and then discuss the current topics or events. Urge your child to write letters requesting information or praising the actions of a person that is in the news.
- Encourage your child to share opinions on issues, books, and movies. Your child should back up claims with evidence.
- Take advantage of technology and have your child use the Internet to research topics of interest.
- Explore your town or city or a place of interest by reading and researching, visiting, or interviewing local historians. Urge your high-schooler to make a video that could serve as an advertisement for the locale.
- Ask your child about future goals and career interests. Help your child research and gather various sources of information on college and career opportunities and then make informed decisions.

# Resources

## Mathematics

### Khan Academy

This site provides an extensive library of user-friendly content for K–12 mathematics. Students can practice at their own pace and make use of interactive challenges and videos from any computer with access to the Internet.

<https://www.khanacademy.org/commoncore>

### Illustrative Mathematics

This site provides mathematical tasks, task solutions, and commentary on how the tasks illustrate content standards. The site also provides videos and vignettes illustrating mathematical practices. <http://www.illustrativemathematics.org>

## English Language Arts

### ReadWriteThink

This website sponsored by the National Council of Teachers of English and the International Reading Association has resources for parents that include writing activities, projects, podcasts, interactive websites to use for composing, and a variety of other resources.

<http://www.readwritethink.org/parent-afterschool-resources/>

### NEWSELA

This website provides students with high-interest nonfiction articles that are updated daily. Each article offers a choice of five different reading levels, making it just right for each child. <https://newsela.com/>



[CTCoreStandards.org](http://CTCoreStandards.org)

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